

CLAIMS

1. A method for encoding an image, comprising:
identifying adjacent blocks in the image;
identifying coding parameters for the adjacent blocks;
skipping deblock filtering between the identified adjacent blocks when the coding
10 parameters for the identified adjacent blocks are similar; and
deblock filtering between the identified adjacent blocks when the coding parameters
for the identified adjacent blocks are not similar.
2. A method according to claim 1 including skipping deblock filtering when the adjacent
15 blocks have similar motion vectors pointing to a same reference image frame.
3. A method according to claim 1 including:
identifying transform coefficients for the adjacent blocks; and
skipping deblock filtering between the adjacent blocks when the transform
20 coefficients are similar.
4. A method according to claim 3 including:
identifying D.C. components in the transform coefficients; and
skipping deblock filtering between the adjacent blocks when the D.C. components are
25 the same or similar.
5. A method according to claim 4 including:
identifying A.C. components in the transform coefficients; and

5 skipping deblock filtering between the adjacent blocks when the D.C. and A.C.
components are the same or similar.

6. A method according to claim 3 including transforming the adjacent blocks using a
Discrete Cosine Transform to generate the transform coefficients.

10 7. A method according to claim 1 including:
comparing blocks in the image with reference frames;
transforming the result of the comparison between the reference frames and the blocks
in the image into transformed blocks having transform coefficients;
15 comparing the similarities between the transform coefficients; and
skipping deblock filtering between adjacent blocks in the image according to the
results of the comparison between the transform coefficients.

20 8. A method according to claim 7 wherein the transform coefficients include D.C.
transform coefficients.

9. A method according to claim 1 including controlling deblock filtering for a loop filter
in an image coder.

25 10. A method according to claim 1 including controlling deblock filtering in one or both
of a loop filter and a post filter in an image decoder.

11. A method according to claim 1 including:

5 identifying similarities between coding parameters in a luminance channel of the adjacent blocks; and

controlling deblock filtering for both the luminance channel and a chrominance channel in the image according to identified similarities in the luminance channel.

10 12. A method according to claim 1 including selectively skipping deblock filtering in any one of a H.261, H.263, H263+, MPEG-1, MPEG-2, or H26L encoding standard according to encoding parameter similarities between adjacent image blocks.

13. An encoder for encoding an image, comprising:
15 a processor adapted to identify adjacent blocks in the input image;
compare coding parameters for the adjacent blocks; and
enable and disable filtering of blocking artifacts between the adjacent blocks according to the comparisons.

20 14. An encoder according to claim 13 wherein the processor is adapted to identify motion vectors and associated reference frames for the adjacent blocks and skip deblock filtering between the adjacent blocks according to the identified motion vectors and reference frames.

15. An encoder according to claim 13 wherein the processor is adapted to identify
25 residual coefficients for the adjacent blocks and skip deblock filtering according to the identified residual coefficients.

5 16. An encoder according to claim 13 wherein the processor is adapted to skip deblock filtering according to D.C. components in the residual coefficients.

17. An encoder according to claim 16 wherein the processor is adapted to skip deblock filtering D.C. and A.C. components in the residual coefficients.

10 18. An encoder according to claim 13 wherein the processor is adapted to compare blocks in the image with reference frames, transform the result of the comparison between the reference frames and the blocks into transformed blocks having transform coefficients, compare the transform coefficients and encoding parameters of adjacent blocks, and skip
15 deblock filtering between adjacent blocks in the image according to the results of the comparison between the transform coefficients and encoding parameters.

19. An encoder according to claim 18 wherein the transform coefficients include D.C. transform components and the encoding parameters include motion vectors and reference
20 frames.

20. A decoder for decoding an encoded image, comprising:
a processor adapted to identify adjacent blocks in the encoded image;
identify coding parameters for the adjacent blocks; and
25 enable or disable filtering of blocking artifacts between the adjacent blocks according to the coding parameters for the adjacent blocks.

5 21. A decoder according to claim 20 wherein the processor is adapted to identify motion vectors and associated reference frames for the adjacent blocks and skip deblock filtering between the adjacent blocks according to the identified motion vectors and reference frames.

22. A decoder according to claim 20 wherein the processor is adapted to identify residual
10 coefficients for the adjacent blocks and skip deblock filtering between the adjacent blocks according to the identified residual coefficients.

23. A decoder according to claim 22 wherein the processor is adapted to identify D.C.
components in the residual coefficients and skip deblock filtering between the adjacent
15 blocks according to the identified D.C. components.

24. A decoder according to claim 23 wherein the processor is adapted to identify similar
A.C. components in the residual coefficients and skip deblock filtering between the identified
adjacent according to the identified D.C. and A.C. components.
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25. A decoder according to claim 20 wherein the processor is adapted to inverse transform the encoded image, compare blocks in the inverse transformed encoded image with reference frames, generate a reconstructed image from the comparison between the inverse transformed encoded image and the reference frame, and skip deblock filtering between
25 adjacent blocks in the reconstructed image according to the coding parameters for the adjacent blocks.

